ABSTRACT OF THE DISCLOSURE

A device is described for actuating the charge-cycling valves (V) in reciprocating internal combustion engines, consisting of a housing (G); a cam (N) mounted in the housing (G) in a revolute joint (ng) so as to be able to rotate, the rotational movement of which cam is derived from a crankshaft; an intermediate member (Z) activated by this cam (N) by way of a first cam joint (zn); and a power take-off member (A) that transfers the movement to the valve (V), and is connected to act with the intermediate member (Z), directly or via other transfer elements, and at least one other cam joint (za) is provided within the active connection from the first cam joint (zn) to the power take-off member (A), whereby this other cam joint (za) is formed by a cam (Kz or Ka, respectively) on one of the two gear mechanism members (Z, A) that form the cam joint (za), in and of themselves, the shape of which cam has at least one point of inflection (W) in the contact region in which a valve lift is produced, whereby the point of inflection (W) is disposed in the region of the cam (Kz or Ka, respectively) that describes the greatest possible valve lift. In order to minimize the forces, i.e. moments between the gear mechanism members, and thus to keep the reactive forces in the system as low as possible, it is proposed that the point of inflection (W) be disposed in such a manner that the surface normal in the contact point, at which the greatest valve lift is achieved, is approximately equal to the surface normal in the contact point, at which the highest valve acceleration occurs.